Quality Control

Work Order ID October-07-13 8:31:36			*107	7912*						Page	1
tem ID: D3183 Revision ID: tem Name: Cap	-9		Accept	*N9000	<u>140</u>	100)* s	etup Star Stop	1 71	S1* S2*	
Start Date: 10/07/ Required Date: 10/21/ Reference:	- 0	-	-	Cust Item II Customer:) :						
	ess Plan: ML5		- 07 Tooling: SPC (Y/N):	Da			F	tun Star Stoj	,	R1* R2*	
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
Draw Nbr	Revision Nbr										
D3183	Rev C1	:									
100 *100* Hardinge Hardinge CNC Lathe Small	Hardinge CNC LA Mem Turn		90	13/10/17			25	Ø	·		-
110 *110* QC Quality Control	QC2- Inspect parts Mem	s off machine FAI/FAIB	0.00 0.00 0.00	is 13/10/17			25	_ Ø			No.
Quality Control 120 *120* QC	QC8- Inspect part Mem		0.00	13-10-1	8		25	\$	<u></u>		_

											DQA:	Date:		
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE				
											QA Closed:	Date:		
Work Orde	oř.					DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Work Order: Part No. NCR No.						Scrap Machining Small Fab Use-as-is Thermoforming Finishing		<u> </u>	Prod. Eng. Coor. Rec/Store/Packaging		Engineering Quality Other			
Root			<u> </u>		Descri	otion of work order update		Initial	Ac	tion	Sign &			
Cause		Date	Step	Qty	c	or Non-conformance	Cr	nief Eng	Desc	cription	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved	quip/Tooling perator Material etup pther rocess upplier raining				٠,									
<u> </u>							AUI	LT CATE	GORY				·	
Bending Centre Not Concentric to O/S Bend BOM/Route Cracks Broken/Dama Crushed/Crimped Burrs		BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misread	on Incomplete ions Incomplete/ nance iled	'Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other					
Ripples in Bend			Drill Holes		Offset									

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 107912 *107912* October-07-13 8:31:36 AM Item ID: D3183-9 Accept *N900040100* Setup Start **Revision ID:** Item Name: Cap **Start Oty: 24.00 Start Date:** 10/07/13 **Cust Item ID:** Required Date: 10/21/13 Req'd Qty: 24.00 **Customer:** Reference: Run Date: _____ Tooling: Process Plan: **Approvals:** Date: Stop SPC (Y/N): Date: Date: OC: Sequence ID/ Tool # Plan Operation Set Up/ Tool ID Accept Reject Reject Insp. Description Qty Qty Work Center ID **Run Hours** Code Number Stamp Identify as per dwg & Stock Location ST 35B 130 0.00 *120* 25

QC

Packaging

Packaging

140

Memo

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

0.00

Quality Control

140

11/18-10-21 MB10-21

Page 2

DAS

										DQA.	Date:	
NCR: Y	es / No				WORK ORDER NON-	COI	NFORN	MANCE / UPI	DATE	QA Closed:	 Date:	
	 				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Work Orde	er:] 1					1	1	
Part N	lo				Rework Scrap			Skid-tube // / Machining // /	Crosstube Small Fab	Water Jet Prod. Eng. Coor.		Engineering Quality
NCR N	lo				Use-as-is Work Order Update]		oforming Large Fab	Finishing Composite			Other
Root				Descri	ption of work order update	П	nitial	Act	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other			ļ		•							
Process						İ						
Supplier			1								!	
Training												
Unapproved												
					<u> </u>	AUL	T CATE	GORY				
Landi	ng Gear			_	General	_				•	_	7
	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete	<u>L</u>	Part Incorre	ct	Weld
	Crushed,	/Crimped			Burrs		Instruct	ions Incomplete/I	Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
	Cuffs				Contamination		Maintenance			Part Moved		
	Heat Tre	at			Countersink		Mislabeled			Positioned Wrong		
	Inspection Strip in Tube Cut Too Short		Cut Too Short	Misread				Power Loss/	Surge	Other		

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

October-07-13 8:31:39 AM

107912

D3183-9 Parent Item:

D3183-9

Parent Item Name: Cap

Work Order ID: 107912

Start Date: 10/07/13

Required Date: 10/21/13

Page

Start Qty: 24.00

Required Qty: 24.00

Comments:

IPP A 06.05.03 New issue KJ

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR1.000		Purchased	No		100	f	17.5500	0.0333	1			
*****		7 *						**				

MDELRINR1 000

Delrin Round Bar 1"

Location Loc Qty Loc Code MAT 17.55 FK 13/10/17 ¥ m126794 17.55

DQA:	Date:	
DQA	· Dutc.	<u>·</u>

WORK ORDER NON-CONFORMANCE / UPDATE NCR: Yes / No QA Closed: Date: **AGAINST DEPARTMENT/PROCESS** DISPOSITION Work Order: Skid-tube Crosstube Engineering Water Jet Rework Small Fab Prod. Eng. Coor. Machining Quality Part No. Scrap Thermoforming Finishing Rec/Store/Packaging Other Use-as-is Supplier NCR No. Work Order Update Large Fab Composite Description of work order update Action Initial Sign & Root Chief Eng Qty Verification Date Step or Non-conformance Description Date QC Inspector Cause Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY Landing Gear** General Pressure/Forced Bend Grain Ovalized Bending Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure Broken/Damaged Cracks Inspection Incomplete Part Incorrect Weld Crushed/Crimped Burrs Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Cuffs Contamination Maintenance Part Moved Countersink Mislabeled Heat Treat Positioned Wrong Power Loss/Surge Cut Too Short Misread Other Inspection Strip in Tube

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

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Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	107917	
Description: Cap	Part Number:	D3183-9	
Inspection Dwg: D3183 Rev: C1		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	Prototype

Drawing	Tolerance	Actual	Accept	Reject	Method of Inspection	Comments
Dimension		Dimension			mspection	
Ø0.830	+/-0.005	° 830	7		FK-04	Vern.
Ø0.720	+/-0.002	.720	7		ħ	ч
Ø0.747	+/-0.001	. イリア.	7		h	h
R0.010	+/-0.010	. 010	7		R - G1	
R0.031	+/-0.010	.031	7		R- 9	
0.199	+/-0.001	0199	/		FK-04	Vern.
0.276	+/-0.010	°519			I _V	h
0.039	+/-0.010	.039.	7		11	h
			·			
	•					

	OAS'-				
Measured by:	44	Audited by:	27	Prototype Approval:	N/A
Date:	13/10/17	Date:	13-10-18	Date:	N/A

Rev	Date	Change		Revised by	Approved
Α	04.04.20	New Issue	(P/O D3183-045)	KJ/RF	1
В	06.03.09	Dimension Ø0.8	330 was Ø0.850	KJ/JLM	<i>G</i> //





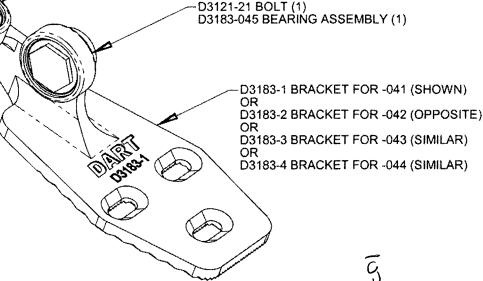
DESIGN		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA					
CHECK	郭	APPROVED	DRAWING NO. D3183	REV. C				
DATE 04.02)2.17	BRACKET ASSEMBLY	SCALI				
 Α.	0	3.01.24	NEW ISSUE					
В	0	3.06.17	REMOVE BEARING; 1.012 WS 0.882	2				
C 04.00.47		4.00.47	ADD 045/0: 0.492 WAS 0.421					

DEO ATTACHED

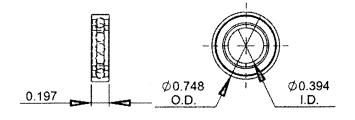
Α.	03.01.24	NEW ISSUE			
В	03.06.17	REMOVE BEARING; 1.012 WS 0.882			
C 04.02.17		ADD -045/-9; 0.182 WAS 0.431			
Cı	## 04.11.09	0-830 WAS 0-850			

D3121-21 BOLT (1)

D3183-045 BEARING ASSEMBLY (1)

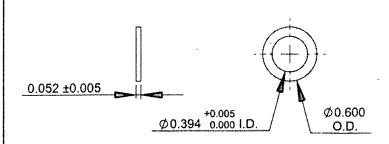


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

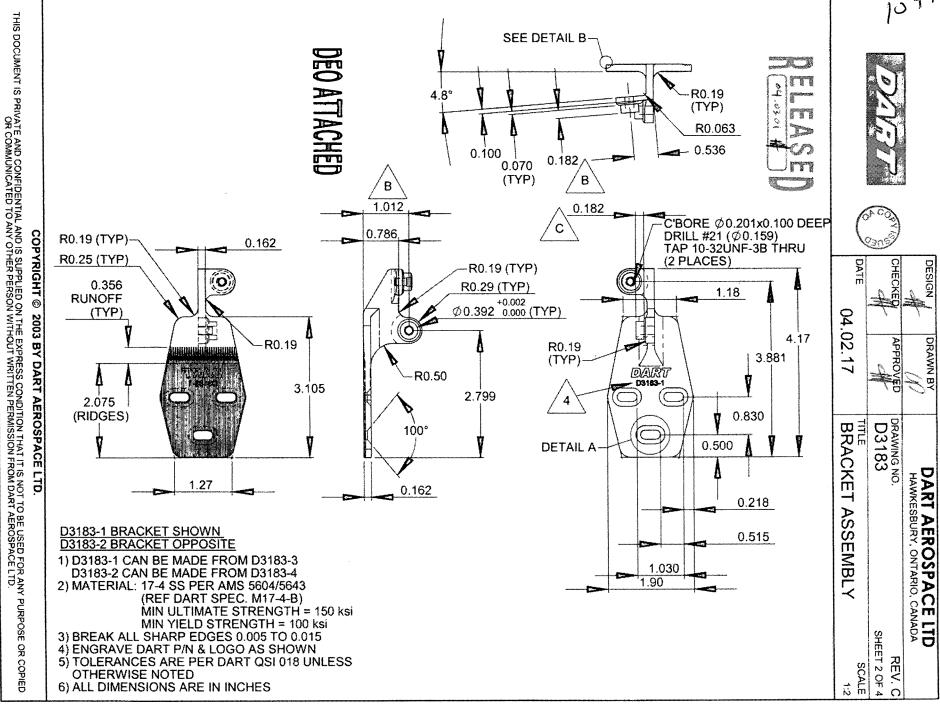
- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

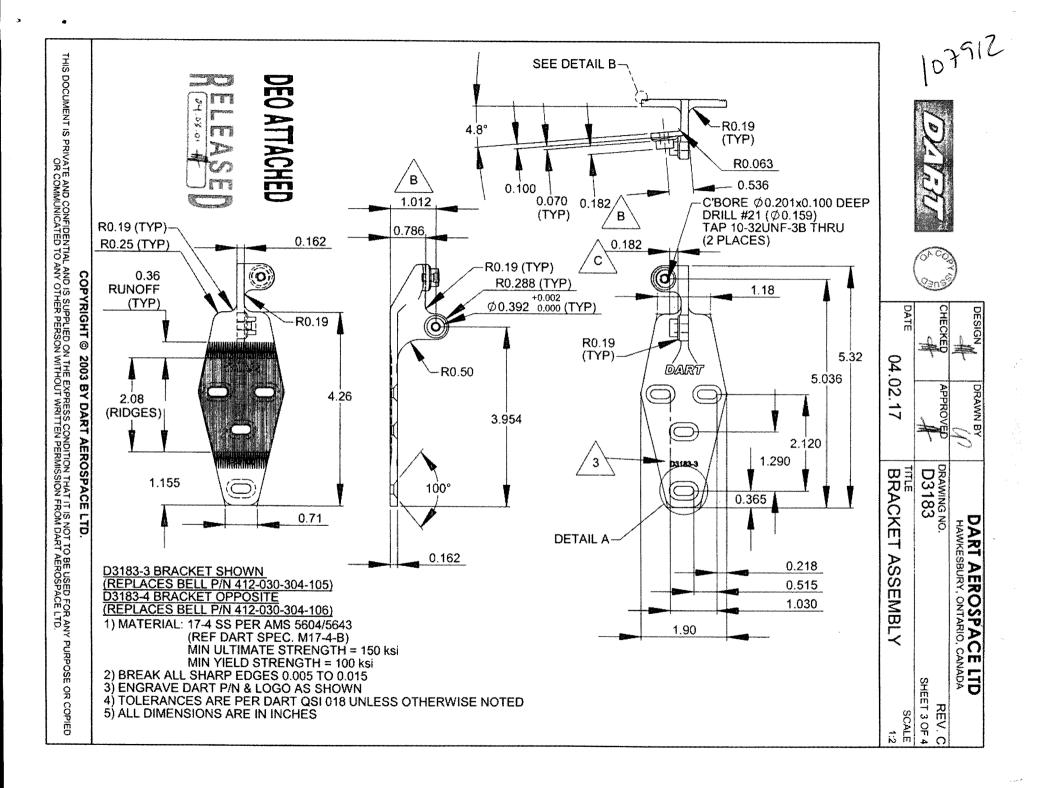


D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) **ANNEALED**
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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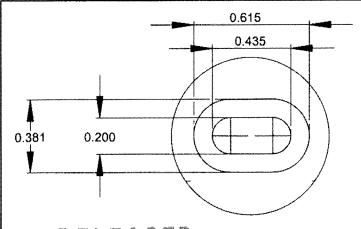








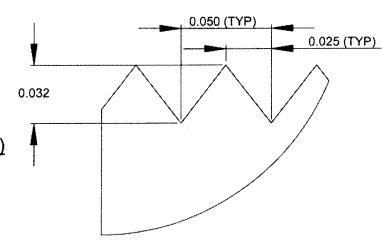
	DESIGN DRAWN BY		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
-	CHECKED	APPROVED	DRAWING NO.	REV. C	
-			D3183	SHEET 4 OF 4	
	DATE		TITLE '	SCALE	
	04	02 17	BRACKET ASSEMBLY	1:1	

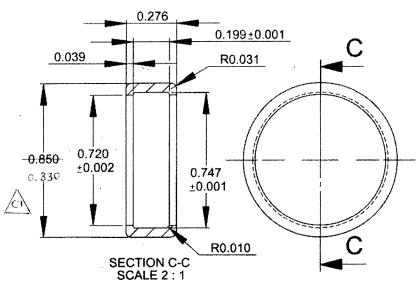


DETAIL A (2:1)

DEO ATTACHED

DETAIL B (20:1)





D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00 (REF DART SPEC. M-DELRIN-R1.00) 2) TOLERANCES ARE PER DART QSI 018
- UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

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DRAWING	NO. TITLE		REV.C1	DART AEROSPACE LTD	D.E.O. NO.	SHEET NO.	SCALE
D3183	BRAC	KET ASSEMBLY	- 1	ENGINEERING ORDER	D3183-C1-1	SHEET 1 OF 1	NTS
DRAWN	P	CHECKED	基	MFG. APPR.	APPROVED M	DE APPR.	
DATE	10.05.14	DATE	10.06.30	DATE (8,06.30 I	DATE 10/06/30	DATE 10/06/30	

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT:

Cr = 1720 N (386 lb) MIN [DYNAMIC] Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012



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